KENNETH E. HORTON

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FEB 1 5 2005

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P. 1

#### FACSIMILE TRANSMISSION SHEET

DATE:

February 15, 2005

BILLING #: 11948-0003

TO:

EXAMINER JOANNIE A. GARCIA

PHONE #:

(571) 272-1861

FAX#:

(703) 872-9306

GROUP UNIT:

2823

**APPLICATION: 10/052,234** 

FROM:

Kenneth E. Horton

OUR FILE:

11948.3

COMMENTS:

Examiner Garcia,

Enclosed is a Supplemental Information Disclosure and Form PTO-1449 Listing all Cited References for entry for the above-identified application.

31 NUMBER OF PAGES INCLUDING COVER SHEET

IF YOU DO NOT RECEIVE ALL OF THE PAGES, PLEASE CALL OUR OFFICE AT (801) 328-3600 AS SOON AS POSSIBLE.

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TRANSMITTA	TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(d))  Docket No. 11948.3									
In Re Application O	f: Duc Chau et al.									
Application No.	Filing Date	Exami	iner	Customer No.	Group Art Unit	Confirmation No.				
10/052,234	January 16, 2002	J. Gai	rcia	27966	2823	9589				
Title: SELF-ALIC	ENED TRENCH MOS	SFETS AND ME	THODS FOR N	MAKING THE	SAME					
-			Address to:	4-						
Commissioner for Patents  The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(c), and on or before payment of the issue fee, and is accompanied by the Statement as specified in 37 CFR 1.97(e) and the fee set forth in 37 CFR 1.17(p).  A check in the amount of is attached.										
🖾 Charge De	eposit Account No.	50-0843	in the	amount of \$18	0.00					
☐ Payment by credit card. Form PTO-2038 is attached.										
included (	e: Information on the on this form. Provide the of Transmission by	le credit card in	formation and	d authorization  Certificate of M	ailing by First C	lass Mail				
I certify that this discount is being Patent and Trader (Fax no. 703-872-February 15, 200	-9306 ) on	n to charge deposit the United States	with the as fire "Common of the common of th	e United States P et class mail	correspondence is ostal Service with s in an envelope ats, P.O. Box 1450 (a)] on	addressed to				
5	Signature JoLin Johnson			Signature of Pe	rson Mailing Corresp	endence				
Typed or Pri	inted Name of Person Signi	ng Certificate		Typed or Printed No	ime of Person Mailin	g Certificate				
Kenneth E. Hor Registration No KIRTON & Mc 1800 Eagle Gate 60 East Sonth T	Signature signature 39,481 CONKIE Tower emple	paying by	Dated:	February 15,	2005					
Salt Lake City,										
Tel: (801) 328-3 Fax: (801) 321-										
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FEB 1 5 2005

Serial No. 10/052,234 Attorney Docket No. 11948.3

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application:

Duc Chau et al.

Confirmation No.:

9589

Group Art Unit:

2823

Serial No.: 10/052,234

Examiner:

J. Garcia

Filed:

January 16, 2002

For:

SELF-ALIGNED TRENCH

MOSFETS AND METHODS FOR

MAKING THE SAME

Mail Stop: DD

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

# SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT <u>UNDER 37 C.F.R. § 1.97(c)</u>

Please find, pursuant to 37 C.F.R. § 1.98(b)(1), the enclosed Form PTO-1449 which contains a list of all patents, publications, or other items that have come to the attention of one or more of the individuals designated in 37 C.F.R. § 1.56(c). Applicant respectfully requests that the Examiner consider the listed document and indicate that it was considered by making appropriate notations on the attached PTO form 1449.

Applicant apologizes for the length and amount of documents cited in this IDS. The undersigned recently discovered the existence of several commonly-owned co-pending patents and/or patent applications of which he was not aware. These co-pending patents/applications are also listed on the PTO form 1449. When these co-pending patents/applications were brought to the undersigned's attention, there was no option but to cite the prior art from these co-pending applications via the present IDS under the standard recently decided by the Court of Appeals for the

Serial No. 10/052,234 Attorney Docket No. 11948.3

Federal Circuit. See In re Dayco v. Total Containment Inc., 329 F.3d 1358, 66 USPO2d 1801 (Fed.

Cir. 2003). The Examiner's attention is also directed to the prosecution history of these

patents/applications.

This submission does not represent that a search has been made or that no better art exists

and does not constitute an admission that each or all of the listed documents are material or

constitute "prior art." If the Examiner applies any of the documents as "prior art" against any claim

in the application and applicant determines that the cited documents do not constitute "prior art"

under United States law, Applicant reserves the right to present to the Office the relevant facts and

law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of

the disclosed invention over the listed documents, should one or more of the documents be applied

against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to

our Deposit Account No. 50-0843.

Date: February 15, 2005

Respectfully submitted.

Kenneth E. Horton

Registration No. 39,481

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1800 Eagle Gate Tower

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Applicant:

Duc Chau et al.

Conf. No. 9589

Serial No.: Filing Date:

Examiner:

10/052,234

Att'y Docket No. 11948.3

Fining For:

January 16, 2002 Group: 2823 SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE

SAME

## INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANT

### Co-Pending Applications

Examiner <u>Initial*</u>		Application <u>Number</u>		Filing <u>Date</u>			
A	1.	08/970,221		11/14/97			
A	2.	09/222,258		12/28/98			
A:	3.	09/267,921		02/26/99			
A	4.	09/286,168		04/05/99			
A	5.	09/343,330		06/30/99			
A	6.	09/405,620		09/24/99			
A	7.	09/448,884		11/24/99			
A	8.	09/468,269		12/20/99			
A	9.	09/640,496		08/16/00			
A	10.	09/774,780		01/30/01			
A	11.	09/782,343		02/12/01			
		U.S. Pate	ent Application	on Publication Documents			
Examiner <u>Initial*</u>		Document Number	Publ. <u>Date</u>	<u>Name</u>	Class	Sub Class	Filing <u>Date</u>
A	12.	2001/0028083	10/11/01	Onishi et al.	257	328	02/09/01

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner:

Form PTO-1449 Applicant: Serial No.: Filing Date: For:	Duc Chau et a 10/052,234 January 16, 2 SELF-ALIGN SAME	002	I MOSFETS AND METI		Cor y Docket	Sheet 2 of 26 of. No. 9589 No. 11948.3 Group: 2823 NG THE
A13.	2001/0032998	10/25/01	Iwamoto et al.	257	330	03/19/01
A14.	2001/0041400	11/15/01	Ren et al.	438	200	05/10/01
A15.	2001/0050394	12/13/01	Onishi et al.	257	343	04/27/01
A16.	2002/0009832	01/24/02	Blanchard	438	142	01/19/01
A17.	2002/0014658	02/07/02	Blanchard	257	330	05/04/01
A18.	2002/0066924	06/06/02	Blanchard	257	328	10/29/01
		U.S. Pat	ent Documents			
Examiner <u>Initial*</u>	Document <u>Number</u>	Issue <u>Date</u>	<u>Name</u>	Class	Sub <u>Class</u>	Filing <u>Date</u>
A19.	4,070,690	01/24/78	Wickstrom	357	68	08/17/76
A20.	4,084,311	04/18/78	Yasuoka et al.	29	571	10/15/76
A21.	4,132,998	01/02/79	Dingwall	357	23	08/29/77
A22.	4,138,649	02/06/79	Schaffe <del>r</del>	330	9	03/25/77
A23.	4,145,703	03/20/79	Blanchard et al.	357	55	04/15/77
A24.	4,221,044	09/09/80	Godejahn, Jr. et al.	29	571	06/06/78
A25.	4,221,045	09/09/80	Godejahn, Jr.	29	571	06/06/78
A26.	4,264,376	04/28/81	Yatsuda et al.	148	1.5	08/15/79
A27.	4,277,881	07/14/81	Godejahn, Jr.	29	571	05/26/78
					· · · · · · · · · · · · · · · · · · ·	

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Applicant: Serial No.:

For:

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Filing Date:

January 16, 2002 Group: 2823 SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE

SAME

Examiner	•••			Date Considered:			-
	A45.	4,541,001	09/10/85	Schutten et al.	357	23.4	09/23/82
	A44.	4,503,601	03/12/85	Chiao	29	571	04/18/83
	A43.	4,503,598	03/12/85	Vora et al.	29	571	05/20/82
······································	A42.	4,503,449	03/05/85	David et al.	357	23.4	09/10/82
	A41.	4,500,898	02/19/85	Cline	357	23	07/06/82
	A40.	4,466,172	08/21/84	Batra	29	571	07/27/81
	A39.	4,455,737	06/26/84	Godejahn, Jr.	29	571	03/11/81
,	A38.	4,452,354	06/05/84	Tabachnick	206	5	01/13/83
	A37.	4,441,247	04/10/84	Gargini et al.	29	571	06/29/81
	A36.	4,424,621	01/10/84	Abbas et al.	29	571	12/30/81
	A35.	4,419,809	12/13/83	Riseman et al.	29	571	12/30/81
	A34.	4,398,339	08/16/83	Blanchard et al.	29	571	09/09/81
	A33.	4,382,827	05/10/83	Romano-Moran et al.	148	1.5	04/27/81
	A32.	4,345,265	08/17/82	Blanchard	357	23	04/14/80
	A31.	4,344,081	08/10/82	Pao et al.	357	43	04/14/80
	A30.	4,329,705	05/11/82	Baker	357	43	05/21/79
	A29.	4,326,332	04/27/82	Kenney	29	571	07/28/80
·	A28.	4,324,038	04/13/82	Chang et al.	29	571	11/24/80
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant:

Duc Chan et al. 10/052,234

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Serial No.: Filing Date:

January 16, 2002

Group: 2823

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For:

SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE

SAME

<b>A</b> 4	16.	4,560,975	12/24/85	Jarva	340	347	03/22/82
A4	7.	4,568,958	02/04/86	Baliga	357	23.4	01/03/84
A4	8.	4,577,391	03/25/86	Hsia et al.	29	571	07/27/84
A4	<b>!9.</b>	4,579,621	04/01/86	Hine ·	156	612	06/25/84
A5	i0.	4,590,458	05/20/86	Evans et al.	340	347	03/04/85
A5	1.	4,593,453	06/10/86	Tam et al.	29	571	06/18/84
A5	2.	4,599,789	07/15/86	Gasner	29	571	06/15/84
A5	3.	4,607,270	08/19/86	Iesaka	357	15	06/08/84
A5	4.	4,638,344	01/20/87	Cardwell, Jr.	357	22	04/15/82
A5	55.	4,639,762	01/27/87	Neilson et al.	357	23.8	04/30/84
A5	6.	4,673,962	06/16/87	Chatterjee et al.	357	23.6	03/21/85
A5	57.	4,682,405	07/28/87	Blanchard et al.	29	571	07/22/85
A5	8.	4,683,643	08/04/87	Nakajima et al.	437	203	07/16/85
A5	9.	4,698,653	10/06/87	Cardwell, Jr.	357	22	10/09/79
A.6	50.	4,701,423	10/20/87	Szluk	437	57	12/20/85
A6	51.	4,716,126	12/29/87	Cogan	437	24	06/05/86
A6	<b>i2</b> .	4,745,079	05/17/88	Pfiester	437	029	03/30/87
A6	53.	4,746,630	05/24/88	Hui et al.	437	235	09/17/86
Examiner:				Date Conside	ered:		

Applicant: Serial No.: Duc Chau et al.

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A64.	4,752,813	06/21/88	Bhatia et al.	357	15	08/08/86
A65.	4,754,310	06/28/88	Coe	357	13	12/04/84.
A66.	4,760,033	07/26/88	Mueller	438	231	03/04/87
A67.	4,767,722	08/30/88	Blanchard	437	41	03/24/86
A68.	4,774,556	09/27/88	Fujii et al.	357	23.5	07/21/86
A69.	4,808,543	02/28/89	Parrillo et al.	437	38	05/07/86
A70.	4,811,065	03/07/89	Cogan	357	23.4	06/11/87
A71.	4,824,793	04/25/89	Richardson et al.	437	47	11/12/87
A72.	4,845,537	07/04/89	Nishimura et al.	357	23.4	12/01/87
A73.	4,853,345	08/01/89	Himelick	437	41	08/22/88
A74.	4,860,072	08/22/89	Zommer	357	23.8	03/10/88
A75.	4,881,105	11/14/89	Davari et al.	357	23.4	06/13/88
A76.	4,893,160	01/09/90	Blanchard	357	23.4	11/13/87
A77.	4,903,189	02/20/90	Ngo et al.	363	127	04/27/88
A78.	4,912,061	03/27/90	Nasr	437	44	04/04/88
A79.	4,914,058	04/03/90	Blanchard	437	203	12/29/87
A80.	4,941,026	07/10/90	Temple	357	23.4	08/26/88
A81.	4,946,799	08/07/90	Blake et al.	437	41	11/09/89
Examiner:			Date Considere	d:		

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For:

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SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE

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	A82.	4,956,308	09/11/90	Griffin et al.	437	41	01/20/87
	A83.	4,961,100	10/02/90	Baliga et al.	357	39	06/20/88
	A84.	4,967,245	10/30/90	Cogan et al.	357	23.4	03/14/88
	A85.	4,983,535	01/08/91	Blanchard	437	40	12/28/88
<u> </u>	A86.	4,990,463	02/05/91	Mori	437	52	06/29/89
<del></del>	A87.	4,992,390	02/12/91	Chang	437	42	07/06/89
· · · · · · · ·	A88.	5,016,068	05/14/91	Mori	357	23.5	12/08/89
	A89.	5,017,504	05/21/91	Nishimura et al.	437	40	04/21/89
	A90.	5,021,846	06/04/91	Ueno	357	23.4	02/06/90
	A91.	5,034,785	07/23/91	Blanchard	257	330	08/24/88
	A92.	5,045,900	09/03/91	Tamagawa	357	23.4	01/22/91
	A93.	5,065,273	11/12/91	Rajeevakumar	361	313	12/04/90
	A94.	5,071,782	12/10/91	Mori	437	48	06/28/90
	A95.	5,072,266	12/10/91	Bulucea eta l.	357	23.4	12/27/88
	A96.	5,111,253	05/05/92	Korman et al.	357	15	08/28/90
	A97.	5,124,764	06/23/92	Mori	357	23.4	01/03/91
	A98.	5,134,448	07/28/92	Johnsen et atl.	357	23.4	01/22/91
	A99.	5,156,989	10/20/92	Williams et al.	437	41	11/08/88

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Duc Chau et al.

Applicant: Serial No.: Filing Date:

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For:

SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE

**SAME** 

A100.	5,160,491	11/03/92	Mori	437	40	02/19/91
A10I.	5,164,325	11/17/92	Cogan et atl.	437	29	10/08/87
A102.	5,164,327	11/17/92	Maruyama	437	40	10/08/91
A103.	5,168,331	12/01/92	Yilmaz	257	331	01/31/91
A104.	5,169,796	12/08/92	Murray et al.	437	41	09/19/91
A105.	5,177,572	01/05/93	Murakami	257	260	04/05/91
A106.	5,188,973	02/23/93	Omura et al.	437	40	04/30/92
A107.	5,208,657	05/04/93	Chatterjee et al.	257	302	07/22/91
A108.	5,216,275	06/01/93	Chen	257	493	09/17/91
A109.	5,219,793	06/15/93	Cooper et al.	437	195	06/03/91
A110.	5,242,845	09/07/93	Baba et al.	437	40	04/10/92
A111.	5,250,450	10/05/93	Lee et al.	437	40	02/12/92
A112.	5,273,922	12/28/93	Tsoi	437	41	09/11/92
A113.	5,275,961	01/04/94	Smayling et al.	437	41	07/16/92
A114.	5,275,965	01/04/94	Manning	437	67	11/25/92
A115.	5,281,548	01/25/94	Prall	437	43	07/28/92
A116.	5,294,824	03/15/94	Okada	257	409	07/31/92
A117.	5,298,442	03/29/94	Bulucea et al.	437	40	09/18/91
Examiner:			Date Consider	ed:	<del></del>	

Applicant:

Duc Chau et al. 10/052,234

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Serial No.: Filing Date:

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Group: 2823

For:

SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE

SAME

Examiner:	45.00		Date Consider	ed·	-	
A135.	5,424,231	06/13/95	Yang	437	40	08/09/94
A134.	5,420,452	05/30/95	Tran et al.	257	428	10/18/93
A133.	5,410,170	04/25/95	Bulucea et al.	257	332	04/14/93
A132.	5,405,794	04/11/95	Kim	437	41	06/14/94
A131.	5,399,513	03/21/95	Liou et al.	437	34	11/17/92
A130.	5,389,570	02/14/95	Shiozawa	437	101	08/18/92
A129.	5,366,914	11/22/94	Takahashi et al.	437	41	01/29/93
A128.	5,365,102	11/15/94	Mehrotra et al.	257	475	07/06/93
A127.	5,350,937	09/27/94	Yamazaki et al.	257	316	10/07/92
A126.	5,346,834	09/13/94	Hisamoto et al.	437	41	03/03/92
A125.	5,341,011	08/23/94	Hshieh et al.	257	330	03/15/93
A124.	5,326,711	07/05/94	Malhi	437	33	01/04/93
A123.	5,316,959	05/31/94	Kwan et al.	437	40	08/12/92
A122.	5,304,831	04/19/94	Yilmaz et al.	257	341	05/12/92
A121.	5,300,452	04/05/94	Chang et al.	437	126	10/27/92
A120.	5,300,447	04/05/94	Anderson	437	41	09/29/92
A119.	5,298,781	03/29/94	Cogan et al.	257	333	07/08/92
A118.	5,298,780	03/29/94	Harada	257	330	11/24/92
			<del></del>	<del> </del>		

Examiner:

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant:

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	_A136.	5,429,977	07/04/95	Lu et al.	437	52	03/11/94
	_A137.	5,430,324	07/04/95	Bencuya	257	495	07/23/92
	A138.	5,432,105	07/11/95	Chien	437	34	09/19/94
	_A139.	5,438,007	08/01/95	Vinal et al.	437	41	09/28/93
	_A140.	5,438,215	08/01/95	Tihanyi	257	401	03/25/94
	_A141.	5,455,190	10/03/95	Hsu	437	40	12/07/94
	_A142.	5,468,982	11/21/95	Hshieh et al.	257	331	06/03/94
	_A143.	5,472,887	12/05/95	Hutter et al.	437	34	11/09/93
	_A144.	5,473,176	12/05/95	Kakumoto	257	192	08/31/94
	_A145.	5,473,180	12/05/95	Ludikhuize	257	336	07/11/94
	_A146.	5,474,943	12/12/95	Hshieh et al.	437	40	08/11/94
	A147.	5,488,010	01/30/96	Wong	437	53	05/10/94
	_A148.	5,508,534	04/16/96	Nakamura et al.	257	135	02/07/95
	A149.	5,514,608	05/07/96	Williams et al.	437	44	10/04/94
	_A150.	5,532,179	07/02/96	Chang et al.	437	40	05/23/95
	_A151.	5,541,425	07/30/96	Nishihara	257	139	12/19/94
	_A152.	5,547,895	08/20/96	Yang	437	57	08/31/94
<del></del>	_A153.	5,554,552	09/10/96	Chi	437	43	04/03/95
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A154	. 5,554,862	09/10/96	Omura et al.	257	137	01/19/94
A155	. 5,558,313	09/24/96	Hshieh et al.	257	342	02/10/95
A156	5,567,634	10/22/96	Hebert et al.	437	41	05/01/95
A157	5,576,245	11/19/96	Cogan et al.	437	203	11/18/92
A158	. 5,578,851	11/26/96	Hshieh et al.	257	330	03/29/96
A159	5,581,100	12/03/96	Ajit	257	331	08/30/94
A160	5,583,065	12/10/96	Miwa	437	41	12/06/95
A161	. 5,592,005	01/07/97	Floyd et al.	257	331	03/31/95
A162	5,593,909	01/14/97	Han et al.	437	41	06/06/95
A163	5,595,927	01/21/97	Chen et al.	437	52	03/17/95
A164	5,597,765	01/28/97	Yilmaz et al.	437	203	04/17/95
A165	5,602,046	02/11/97	Calafut et al.	437	41	04/12/96
A166	5,605,852	02/25/97	Bencuya	437	40	05/18/95
A167	5,614,751	03/25/97	Yilmaz et al.	257	394	04/15/96
A168	5,623,152	04/22/97	Majumdar et al.	257	330	11/21/95
A169	5,629,543	05/13/97	Hshieh et al.	257	330	08/21/95
A170	5,639,676	06/17/97	Hshieh et al.	437	40	02/16/96
A171	. 5,648,670	07/15/97	Blanchard	257	329	06/07/95
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A172.	5,656,843	08/12/97	Goodyear et al.	257	329	06/13/96
A173.	5,661,322	08/26/97	Williams et al.	257	331	06/02/95
A174.	5,665,619	09/09/97	Kwan et al.	438	270	05/13/96
A175.	5,665,996	09/09/97	Williams et al.	257	401	12/30/94
A176.	5,674,766	10/07/97	Darwish et al.	437	40	04/26/95
A177.	5,684,319	11/04/97	Hebert	257	336	08/24/95
A178.	5,684,320	11/04/97	Kawashima	257	351	07/03/95
A179.	5,688,725	11/18/97	Darwish et al.	438	270	06/06/95
A180.	5,689,128	11/18/97	Hshieh et al.	257	331	08/21/95
A181.	5,693,569	12/02/97	Ueno	437	203	12/18/96
A182.	5,701,026	12/23/97	Fujishima et al.	257	510	10/25/95
A183.	5,705,409	01/06/98	Witek	437	35	09/28/95
A184.	5,710,072	01/20/98	Krautschneider et al.	438	197	05/02/95
A185.	5,717,237	02/10/98	Chi	257	315	06/17/96
A186.	5,719,084	02/17/98	Mallon et al.	438	783	11/29/95
A187.	5,719,409	02/17/98	Singh et al.	257	77	06/06/96
A188.	5,721,148	02/24/98	Nishimura	437	40	12/03/96
A189.	5,729,037	03/17/98	Hshieh et al.	257	329	04/26/96
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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A190.	5,741,396	04/21/98	Loewenstein	156	643.1	04/29/94
A191.	5,767,004	06/16/98	Balasubramanian et al.	438	592	04/22/96
A192.	5,767,550	06/16/98	Calafut et al.	257	355	10/16/96
A193.	5,770,878	06/23/98	Beasom	257	330	04/10/96
A194.	5,780,343	07/14/98	Bashir	438	269	12/20/95
A195.	. 5,783,491	07/21/98	Nakamura et al.	438	702	02/02/95
A196.	5,783,493	07/21/98	Yeh et al.	438	718	01/27/97
A197.	. 5,795,792	08/18/98	Nishihara	437	6	05/10/96
A198.	5,801,408	09/01/98	Takahashi	257	212	02/13/96
A199.	5,801,417	09/01/98	Tsang et al.	257	333	08/13/93
A200.	. 5,808,340	09/15/98	Wollesen et al.	257	330	09/18/96
A201.	. 5,814,858	09/29/98	Williams	257	328	03/15/96
A202.	. 5,818,084	10/06/98	Williams et al.	257	329	05/15/96
A203.	. 5,869,874	02/09/99	Manning	257	382	01/02/97
A204.	. 5,879,971	03/09/99	Witek	438	238	09/28/95
A205.	. 5,879,994	03/09/99	Kwan et al.	438	268	04/15/97
A206	. 5,894,157	04/13/99	Han et al.	257	407	06/27/94
A207.	. 5,895,951	04/20/99	So et al.	257	330	04/05/96
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A2	208.	5,895,952	04/20/99	Darwish et al.	257	330	08/21/96
A2	209.	5,897,374	04/27/99	Lin	438	666	06/04/97
A2	210.	5,915,180	06/22/99	Hara et al.	438	270	04/05/95
A2	211.	5,929,690	07/27/99	Williams	327	374	09/25/97
A2	212.	5,943,581	08/24/99	Lu et al.	438	386	11/05/97
A2	213.	5,945,724	08/31/99	Parekh et al.	257	510	04/09/98
A2	214.	5,959,324	09/28/99	Kohyama	257	301	07/11/97
A2	215.	5,972,741	10/26/99	Kubo et al.	438	138	10/28/97
A2	216.	5,973,360	10/26/99	Tihanyi	257	330	09/21/98
A2	217.	5,977,591	11/02/99	Fratin et al.	257	344	03/18/97
A2	218.	5,998,833	12/07/99	Baliga	257	329	10/26/98
A2	219.	5,998,836	12/07/99	Williams	257	341	04/30/97
A2	220.	5,998,837	12/07/99	Williams	257	341	08/28/97
A2	221.	6,001,704	12/14/99	Cheng et al.	438	410	06/04/98
A2	222.	6,005,271	12/21/99	Hshieh	257	341	11/05/97
A2	223.	6,008,097	12/28/99	Yoon et al.	438	303	12/11/97
A2	224.	6,008,520	12/28/99	Darwish et al.	257	330	07/16/97
A2	225.	6,015,727	01/18/00	Wanlass	438	218	06/08/98
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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A	226.	6,020,250	02/01/00	Kenney	438	422	04/01/98
A	227.	6,037,202	03/14/00	Witek	438	212	08/18/97
A	228.	6,037,628	03/14/00	Huang	257	329	06/30/97
A	229.	6,037,632	03/14/00	Omura et al.	257	341	11/05/96
A	230.	6,040,600	03/21/00	Uenishi et al.	257	330	08/11/97
A	231.	6,049,108	04/11/00	Williams et al.	257	341	08/28/97
A	232.	6,051,468	04/18/00	Hshieh	438	270	09/15/97
A	233.	6,051,488	04/18/00	Lee et al.	438	589	01/14/98
A	234.	6,057,558	05/02/00	Yamamoto et al.	257	77	03/04/98
A	235.	6,060,745	05/09/00	Tadokoro et al.	257	329	01/06/98
A	236.	6,066,878	05/23/00	Neilson	257	342	07/02/98
A	237.	6,074,923	06/13/00	Lee	438	305	06/09/98
A	238.	6,081,009	06/27/00	Neilson	257	341	11/10/97
A	239.	6,084,264	07/04/00	Darwish	257	329	11/25/98
A	240.	6,084,268	07/04/00	de Fresart et al.	257	342	11/03/97
A	241.	6,087,232	07/11/00	Kim et al.	438	289	08/18/98
A	242.	6,091,115	07/18/00	Ohtani et al.	257	369	11/14/97
A	243.	6,096,629	08/01/00	Tsai et al.	438	570	11/05/98
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	A244.	6,097,061	08/01/00	Liu et al.	257	330	03/30/98
	A245.	6,097,063	08/01/00	Fujîhira	257	339	01/21/97
	A246.	6,100,132	08/08/00	Sato et al.	438	243	06/29/98
	A247.	6,103,578	08/15/00	Uenishi et al.	438	268	04/02/99
	A248.	6,107,192	08/22/00	Subrahmanyan et al.	438	637	12/30/97
	A249.	6,110,799	08/29/00	Huang	438	430	06/30/97
	A250.	6,133,587	10/17/00	Takeuchi et al.	257	77	02/13/98
	A251.	6,156,606	12/05/00	Michaelis	438	243	11/17/98
	A252.	6,156,611	12/05/00	Lan et al.	438	268	07/20/98
	A253.	6,159,823	12/12/00	Song et al.	438	437	09/23/99
	A254.	6,163,052	12/19/00	Liu et al.	257	334	12/16/97
	A255.	6,168,983	01/02/01	Rumennik et al.	438	188	02/05/99
	A256.	6,171,935	01/09/01	Nance et al.	438	489	05/24/99
<del> </del>	A257.	6,174,785	01/16/01	Parekh et al.	438	424	06/18/98
	A258.	6,184,545	02/06/01	Werner et al.	257	109	09/14/98
	A259.	6,184,555	02/06/01	Tihanyi et al.	257	342	12/04/98
	A260.	6,188,105	02/13/01	Kocon et al.	257	330	04/01/99
	A261.	6,191,447	02/20/01	Baliga	257	330	05/28/99
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A2	62.	6,198,127	03/06/01	Kocon	257	328	05/19/99
A2	63.	6,201,279	03/13/01	Pfirsch	257	333	10/22/99
A2	64.	6,204,097	03/20/01	Shen et al.	438	133	03/01/99
A2	65.	6,204,533	03/20/01	Williams et al.	257	341	06/02/98
A2	66.	6,207,994	03/27/01	Rumennik et al.	257	342	02/05/99
A2	67.	6,222,229	04/24/01	Hebert et al.	257	327	06/14/99
A2	.68.	6,225,649	05/01/01	Minato	257	133	01/22/98
A2	269.	6,228,727	05/08/01	Lim et al.	438	296	09/27/99
A2	270.	6,239,464	05/29/01	Tsuchitani et al.	257	330	01/07/99
A2	271.	6,265,269	07/24/01	Chen et al.	438	270	08/06/99
A2	272.	6,271,100	08/07/01	Ballantine et al.	438	424	02/24/00
A2	273.	6,271,153	08/07/01	Moore	438	787	06/26/00
A2	274.	6,271,562	08/07/01	Deboy et al.	257	341	03/01/99
A2	275.	6,277,706	08/21/01	Ishikawa	438	424	06/08/98
A2	276.	6,291,298	09/18/01	Williams et al.	438	270	05/25/99
A2	277.	6,291,856	09/18/01	Miyasaka et al.	257	335	11/10/99
A2	278.	6,294,818	09/25/01	Fujibira	257	409	05/30/00
A2	279.	6,297,534	10/02/01	Kawaguchi et al.	257	341	10/07/99
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A280.	6,307,246	10/23/01	Nitta et al.	257	493	07/23/98
A281.	6,309,920	10/30/01	Laska et al.	438	202	07/20/98
A282.	6,313,482	11/06/01	Baliga	257	77	05/17/99
A283.	6,326,656	12/04/01	Tihanyi	257	288	02/24/00
A284.	6,337,499	01/08/02	Werner	257	329	08/17/98
A285.	6,346,464	02/12/02	Takeda et al.	438	514	06/27/00
A286.	6,346,469	02/12/02	Greer	438	614	01/03/00
A287.	6,351,018	02/26/02	Sapp	257	499	02/26/99
A288.	6,353,252	03/05/02	Yasuhara et al.	257	487	07/28/00
A289.	6,362,112	03/26/02	Hamerski	438	737	11/08/00
A290.	6,362,505	03/26/02	Tihanyi	257	329	07/27/00
A291.	6,365,462	04/02/02	Baliga	438	270	11/29/00
A292.	6,365,930	04/02/02	Schillaci et al.	257	339	06/01/00
A293.	6,368,921	04/09/02	Hijzen et al.	438	270	09/28/00
A294.	6,376,314	04/23/02	Jerred	438	270	11/06/98
A295.	6,384,456	05/07/02	Tihanyi	257	401	03/30/00
A296.	6,387,764	05/14/02	Curtis et al.	438	296	03/31/00
A297.	6,388,287	05/14/02	Deboy et al.	257	341	03/12/01
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	A313.	EP 0 801 425	10/15/97	EPO	_	_	Yes
	A314.	EP 0 975 024	01/26/00	EPO		_	Yes
	A315.	GB 2 269 050	01/26/94	UK		-	Yes
<del> </del>	A316.	JP 56 131 960	10/15/81	Japan			Yes
	A317.	JP 57 018 365	01/30/82	Japan			Yes
	A318.	JP 57 153 469	09/22/82	Japan			Yes
	A319.	JP 58 137 254	08/15/83	Japan			Yes
	A320.	JP 58 210 678	12/07/83	Japan			Yes
	A321.	JP 59 080 970	05/10/84	Japan	70	_	Yes
	A322.	JP 59 193 064	11/01/84	Japan			Yes
	A323.	JP 60 028 271	02/13/85	Japan			Yes
	A324.	JP 61 102 782	05/21/86	Japan			Yes
	A325.	JP 62 012 167	01/21/87	Japan		~ <b>~</b>	Yes
	A326.	JP 62 016 572	01/24/87	Japan			Yes
	A327.	JP 62 023 171	01/31/87	Japan			Yes
	A328.	JP 62 046 569	02/28/87	Japan	-		Yes
	A329.	JP 62 179 482	08/06/87	Japan			Yes
	A330.	JP 63 114 173	05/19/88	Japan			Yes
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A331	. ЈР 63 288 047	11/25/88	Japan			Yes
A332	2. JP 1 94 672	04/13/89	Japan		-	Yes
A333	э. JP 5 226 661	09/03/93	Japan		_	Yes
A334	. ЈР 5 251 387	09/28/93	Japan		_	Yes
A335	i. JP 6 163 910	06/10/94	Japan			Yes
A336	5. JP 8 204 194	08/09/96	Japan			Yes
A337	у. ЈР 8 250 731	09/27/96	Japan		_	Yes
A338	3. JP 8 316 479	11/29/96	Japan			Yes
A339	). ЈР 9 036 362	02/07/97	Japan			Yes
A340	). ЈР 9 102 607	04/15/97	Japan			Yes
A341	ЈР 9 270 512	10/14/97	Japan			Yes
A342	д. ЈР 2000 040 822	02/08/00	Japan			Yes
A343	я. <b>JP</b> 2000 040 872	02/08/00	Japan	-		Yes
A344	JP 2000 156 978	06/06/00	Japan	. <del>-</del>		Yeş
A345	5. JP 2000 277 726	10/06/00	Japan			Yes
A346	5. ЈР 2000 277 728	10/06/00	Japan	-		Yes
A347	7. ЈР 2001 015 448	01/19/01	Japan	_		Yes
A348	3. JP 2001 015 752	01/19/01	Japan			Yes
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	<b>A</b> 349.	JP 2001 102 577	04/13/01	Japan		_	Yes
<i>F</i>	<b>4</b> 350.	JP 2001 111 041	04/20/01	Japan			Yes
	<b>A</b> 351.	JP 2001 135 819	05/18/01	Japan	**	-	Yes
	<b>4.352.</b>	JP 2001 144 292	05/25/01	Japan	**		Yes
	<b>A</b> 353.	JP 2001 244 461	09/07/01	Japan			Yes
<i>F</i>	A354.	JP 2001 313 391	11/09/01	Japan	nn.		Yes
<i>E</i>	A355.	WO 93/03502	02/18/93	PCT			Yes
	A356.	WO 95/34094	12/14/95	PCT			Yes
<i>E</i>	A357.	WO 97/07547	02/27/97	PCT	-		Yes
<i>F</i>	<b>4</b> 358.	WO 97/16853	05/09/97	PCT			Yes
	<b>A</b> 359.	WO 00/33386	06/08/00	PCT			Yes
	<b>A</b> 360.	WO 00/68997	11/16/00	PCT		-	Yes
<i>P</i>	<b>A</b> 361.	WO 00/68998	11/16/00	PCT	<del>-</del>		Yes
	A362.	WO 01/06550	01/25/01	PCT			Yes
A	<b>A</b> 363.	WO 01/06557	01/25/01	PCT			Yes
	<b>1</b> 364.	WQ 01/45155	06/21/01	PCT	_		Yes
	<b>A</b> 365.	WO 01/59847	08/16/01	PCT	_		Yes
	A366.	WO 01/71815	09/27/01	PCT			Yes
Examiner:				Date Considered:			

Form PTO-1449 Applicant: Serial No.: Filing Date: For:	Duc Chau et al. 10/052,234 January 16, 200 SELF-ALIGNE SAME	2 D TRENCH M	IOSFETS AND	Atto METHODS FO	C 'y Docke	Sheet 22 of 26 onf. No. 9589 t No. 11948.3 Group: 2823 ING THE
A367.	WO 01/95385	12/13/01	PCT		<b></b>	Yes
A368.	WO 01/95398	06/01/01	PCT		_	Yes
		Other D	ocuments			
(including author	(if listed), title, relev	ant pages, date	e of publication	including at leas	st month a	and year).
Examiner <u>Initial*</u>						
A369.	Blanchard, "Option Electronics Labor IDEZ696-2 (Apr.	ratory, Integrate				
A370.		Chang et al., "A Highly Manufacturable Corner Rounding Solution for 0.18 µm Shallow Trench Isolation," IEDM Tech. Digest, pp. 661-664 (1997).				
A371.	Chang, et al., 'No with an Atomic-I	Chang, et al., "Numerical and Experimental Analysis of 500-V Power DMOSFET with an Atomic-Lattice Layout", 47th Annual Device Research Conference, Jun. 1989				MOSFET ce, Jun. 1989.
A372.	Chang, et al., "Se m.OMEGA.cm.s 2334, vol. ED-34	up.2", IEEE Tr				
A373.	Chang, T.S., et al Isolation," IBM T	, "Vertical FET Technical Discl	Γ Random-Acce osure Bulletin,	ess Memories wi pp. 3683-3687 (	th Deep 7 Jan. 1980	Trench ).
A374.	Geipel et al., "Co Technologies", P 8, pp. 1417-1424	roceedings: IE				
A375.		Goodenough, "Dense MOSFET Enables Portable Power Control", Tech Insights, Electronic Design, Apr. 14, 1997.				Insights,
Examiner:		•	Date Con	sidered:		
	itial if reference consideration in conformance a					

Form PTO-1449 Applicant: Serial No.: Filing Date: For:	Sheet 23 of 26 Duc Chau et al. Conf. No. 9589 10/052,234 Att'y Docket No. 11948.3 January 16, 2002 Group: 2823 SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE SAME
A376.	Grant et al., "Power Mosfets: Theory and Applications," A. Wiley-Interscience Publication, COPYRGT. 1989, pp. 5-23. [ISBN 0-471-82867-X].
A377.	Ha D. et al., "Cell Transistor Design Using Self-Aligned Local Channel Implant (SALCI) for 4GB DRAMS and Beyond," International Conference on Solid State Devices and Materials, JA, Japan Society of Applied Physics, Tokyo, 1 September 1997, pp. 514-515, XP000728217, figure 1.
A378.	Joshi, et al., "Study of the Growth Temperature Dependence of Performance and Reliability of Thin MOS Gate Oxides", Proceedings: IEEE Transactions of Electron Devices, vol. 39, No. 9, pp. 2099-2107, Sep. 1992.
A379.	Kao et al., "Two Dimensional Thermal Oxidation of Silicon-I. Experiments," IEEE Transactions on Electron Devices, vol. ED-34, No. 5, May 1987.
A380.	Kao et al., "Two Dimensional Thermal Oxidation of Silicon-II. Modeling Stress Effects in Wet Oxides," IEEE Transactions on Electron Devices, vol. ED-35, No. 1, Jan. 1988.
A381.	Kasai, et al., "Hot-Carrier-Degradation Characteristics for Flourine-Incorporated nMOSFET's" Proceedings: IEEE Transactions on Electron Devices, vol. 37, No. 6, pp. 1426-1431, Jun. 1990.
A382.	Lidow et al., "Power Mosfet Technology," (International Electron Devices meeting, Dec. 3-5, 1979, IEAM Technical Digest, pp. 79-83.
A383.	Lisiak et al., "Optimization of Nonplanar Power MOS Transistors," IEEE Transactions on Electron Devices, vol. ED-25, No. 10, pp. 1229-1234 (Oct. 1978).
A384.	Mahalingam et al., "The Graded Doped Power UMOSFET," Power Semiconductor Research Center Annual Report, pp. 68-71, North Carolina State University, 1968.
A385.	Mahalingam et al., "A Low Forward Drop High Voltage Trench MOS Barrier Schottky Rectifier with Linearly Graded Doping Profile," PRSC Document TR-97-030, Power Semiconductor Research Center, North Carolina State University, 1997.
Examiner:	Date Considered:
*EXAMINER: In through citation if	itial if reference considered, whether or not citation is in conformance with MPEP 609; draw line not in conformance and not considered. Include copy of this form with next communication to

Form PTO-1449 Applicant: Serial No.: Filing Date: For:	Sheet 24 of 26 Duc Chau et al. Conf. No. 9589 10/052,234 Att'y Docket No. 11948.3 January 16, 2002 Group: 2823 SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE SAME
A386.	Matsuda et al., "Novel Corner Rounding Process for Shallow Trench Isolation utilizing MSTS (Micro-Structure Transformation of Silicon)," IEDM Tech. Digest, pp. 137-140 (December 1998).
A387.	Mena J. et al., "High Frequency Performance of VDMOS Power Transistors," International Electron Devices Meeting. Technical Digest, Washington, D.C., USA, 8-10 Dec. 1980, pp. 91-94, XP002148592 1980, N.Y., N.Y., USA, IEEE, USA, fig. 1.
A388.	Morisette, "Schottky Barrier Diodes", http://www.ecn.purdue.edu/WBG/Device_Research/Schottky_Diodes/Index.html, SiC Schottky Barrier Diode Development at Purdue.
A389.	Nandakumar et al., "Shallow Trench Isolation for advanced ULSI CMOS Technologies," IEDM Tech. Digest, pp. 133-136 (December 1998).
A390.	Nouri et al., "An Optimized Shallow Trench Isolation for sub-0.18 µm ASIC Technologies," SPIE Vol. 3506, pp. 156-166 (September 1998).
A391.	Ou-Yang, "Double Ion Implanted V-MOS Technolgy," IEEE Journal of Solid-State Circuits, vol. SC-12, No. 1, pp. 3-10 (Feb. 1977).
A392.	Plummer, et al., Silicon VLSI Technology, 2000, pp. 612-649.
A393.	Salama et al., "Nonplanar Power Field-Effect Transistor," IEEE Transactions on Electron Devices, vol. ED-25, No. 10, pp. 1222-1228 (Oct. 1978).
A394.	Salama et al., "V Groove M.O.S. Transistor Technology," Electronic letters vol. 9, No. 19 (Sep. 20, 1973).
A395.	Salama et al., "VMOSA New MOS Integrated Circuit Technology," Solid-State Electronics, vol. 17, pp. 791-797 (1974).
A396.	Singer, "Empty Spaces in Silicon (SS): An Alternative to SOL," Semiconductor International, December 1999, page 42.
Examiner:	Date Considered:
*EXAMINER: Init through citation if applicant.	rial if reference considered, whether or not citation is in conformance with MPEP 609; draw line not in conformance and not considered. Include copy of this form with next communication to

Form PTO-1449 Applicant: Serial No.: Filing Date: Fox:	Duc Chan et al.  10/052,234  January 16, 2002  SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE SAME
A397.	Singer, "Metal Gates Could Replace Poly Gates for 0.1 µm Generation", Semiconductor International, Wafer Processing, October 1997.
A398.	Sun, "Physics and Technology of Power MOSFETs," Stanford Electronics Laboratory, Integrated Circuits Laboratory, Technical Report No. IDEZ696-1 (Feb. 1982).
A399,	Sze, "P-N-Junction Diode" Physics of Semiconductor Devices Second Edition Bell Laboratories, pp. 63-108 (1981).
A400.	Ueda et al., "An Ultra-Low On-Resistance Power MOSFET Fabricated by Using a Fully Self-Aligned Process", IEEE Transactions on Electron Devices, Apr. 1987, pp. 926-930, vol. ED-34, No. 4.
A401.	Wolf, S., Silicon Processing for the VLSI Era, vol. 2, Lattice Press, p. 558, 1990.
A402.	Yagishita A. et al., "High Performance Metal Gate MOSFETS Fabricated by CMP for 0.1MUM Regime," International Electron Devices Meeting, US, N.Y., N.Y., IEEE, 6 December 1998, pp. 785-788, XP000859487 ISBN: 0-7803-4775-7.
A403.	"CoolMOS.TM. C2 the second generation", Infineon.
A404.	"IR develops CoolMOS.TMequivalent technology, positions it at the top of a 3-tiered line of new products for SMPS", wysiwyg://79/http://www.irf.com/_FKK4aEd/whats-new/nr990403.ht, International Rectifier, Jul. 2000.
A405.	Technical Literature from Applied Materials, Fathad Moghadam, "Delivering Value Around New Industry Paradigms," pp. 1-11, vol. 2, Issue, Nov. 1999.
A406.	Technical Literature from Quester Technology, Model APT-4300 300mm Atmospheric TEOS/Ozone CVD System, No date.
A407.	Technical Literature from Quester Technology, Model APT-6000 Atmospheric TEOS-Ozone CVD System, No date.
Examiner:	Date Considered:
*EXAMINER: Inithrough citation if applicant.	tial if reference considered, whether or not citation is in conformance with MPEP 609; draw line not in conformance and not considered. Include copy of this form with next communication to

Form PTO-1449 Applicant: Serial No.: Filing Date: For:	Sheet 26 of 26  Duc Chau et al.  Conf. No. 9589  10/052,234  Att'y Docket No. 11948.3  January 16, 2002  Group: 2823  SELF-ALIGNED TRENCH MOSFETS AND METHODS FOR MAKING THE  SAME
A408.	Technical Literature from Semiconductor Fabtech, Curtis, et al., APCVD TEOS: 03 Advanced Trench Isolation Applications, 9th Edition, No date.
A409.	Technical Literature from Semiconductor International, John Baliga, Options for CVD of Dielectrics Include Low-k Materials, Jun. 1998.
A410.	Technical Literature from Silicon Valley Group Thermal Systems, APNext, High Throughout APCVD Cluster Tool for 200 mm/300 mm Wafer Processing, No date.
DOCS-#800206-v1-Supp	p_IDS_1449.DOC

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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